

Amendment
Application No. 10/797,188
Attorney Docket No. 960045E

REMARKS

Claims 1-18 are pending. Claims 1, 2, 6, 9 and 12 are amended and new claims 15-18 are added.

As a preliminary matter the Examiner is requested to expressly consider Japanese documents AN, AO and AP which were cited in the Information Disclosure Statement filed on March 11, 2004. The Office Action had contended that the information disclosure statement did not comply with the provisions of 37 CFR 1.97, 1.98 and MPEP §609 because copies of these documents were not provided. However, copies of foreign documents are not required in a situation specified by 37 CFR § 1.98(d). That is, a copy is not required if a copy was previously submitted in an earlier application. As pointed out in the Information Disclosure Statement filed on March 11, 2004, the documents were made of record in parent application Serial No. 09/637,256. It is noted that Serial No. 09/637,256 is a divisional of Serial No. 09/037,068 (US Patent No. 6,395,599) which is a divisional of Serial No. 08/592,481 (US Patent No. 5,874,756). Accordingly, the Examiner is requested to expressly acknowledge consideration of the cited references.

Claims 2 and 4 were rejected under 35 USC §112, second paragraph, as being indefinite. It is believed that the amended claims are in full compliance with 37 CFR §112. Favorable reconsideration is earnestly solicited.

Claims 1-14 were rejected under 35 USC §103(a) as being unpatentable over Tottori et al. in view of Dennison et al. Favorable reconsideration of this rejection is requested in view of the amendments made herein and the following arguments.

Amended claim 1 includes the features of forming a hole which includes the first step of etching the third insulation film, the second step of etching the second insulation film and the third step of etching the first insulation film, wherein an etching condition at the first step being different from that at the second step. In other words, the hole is formed by etching the third and the second insulation films step by step. Thus, in the step of forming the hole, the third insulation film can be etched with an appropriate etching condition having high etching selectivity with respect to the second insulation film, and the second insulation film can be etched with an appropriate etching condition having high etching selectivity with respect to the first insulation film. Accordingly, a hole having a high aspect ratio can be easily formed with decreased etching damage given to the lower structure. Especially, when the first insulation film has a substantially flat surface as claimed, the etching selectivity of the third insulation film with respect to the second insulation film becomes higher than that in the case when the second insulation film is formed on a slant surface. Claims 6, 9 and 12 have features similar to the features of claim 1 described above.

In the Office Action, the Examiner argues that Tottori et al. discloses a connection hole formed by photolithography and RIE in the first silicon oxide film/nitride film 2, the oxide film 3, the oxide film 5, and the second silicon oxide film/nitride film 9, at column 11, lines 18-21.

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The Examiner argues that this disclosure reads on the claimed etching steps. Applicants respectfully disagree.

It is respectfully submitted that the language of the amended claims clearly distinguishes over the disclosure of Tottori et al. That is, Tottori et al. does not teach or suggest that an etching condition at the first step is different from that of the second step when forming the hole. Tottori et al. only discloses that its hole is formed by RIE which does not teach or suggest forming a hole by plural etching steps.

Furthermore, the silicon oxide film and the silicon nitride film may have substantially the same etching rate according to the etching condition. Thus, the etching process for forming the connection hole of Tottori et al. can not be technically specified based on the disclosure of Tottori et al.

Dennison et al. fails to provide the teachings which Tottori et al. lack. That is, Dennison et al. does not teach or suggest that its capacitor contact openings are formed by plural etching steps.

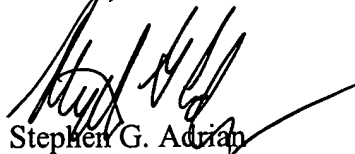
Since the cited art fails to teach or suggest the features of the amended claims, the presently claimed invention distinguishes thereover. Prompt and favorable reconsideration is earnestly solicited.

Should the Examiner deem that any further action by applicants would be desirable to place the application in condition for allowance, the Examiner is encouraged to telephone applicants' undersigned attorney.

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If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



Stephen G. Adrian
Attorney for Applicants
Registration No. 32,878
Telephone: (202) 822-1100
Facsimile: (202) 822-1111

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Attachment: Petition for Extension of Time